

FEB 08 2013

Mr. Juan Somoano
Glenn Springs Holdings, Incorporated
5005 LBJ Freeway
Dallas, Texas 75244

RE: Phase I On-Site Groundwater Investigation RFI Report
Occidental Chemical Corporation, 6200 S. Ridge Road, Wichita, Kansas
RCRA ID #KSD007482029

Dear Mr. Somoano:

The U.S. Environmental Protection Agency has reviewed the above referenced report for the Occidental Chemical Corporation (OCC) Wichita facility, which was received on November 19, 2012. The EPA has the following comments on this report:

1. Section 4.2.4, 4th bullet, contains the phrase, "above aqueous solubility results..." Please clarify the meaning of the 4th bullet.
2. Section 4.6 references Occidental's 2010 report where a capture zone evaluation followed the EPA guidance presented in the document, *A Systematic Evaluation of Capture Zones at Pump and Treat Systems*, dated January 2008. Sections 4.6.1 and 4.6.2 refer to capture zone re-evaluations performed for this report. In describing the basis for the corresponding conclusions, this report discusses two lines of evidence including observations of contaminant concentrations and contour lines for the groundwater potentiometric surfaces.

With respect to utilizing potentiometric surface contour lines to denote capture, the EPA cautions against supposing drawdown and capture are the same, as noted in Figure 6 of the referenced 2008 EPA guidance document. To support conclusions referred to in the report, please discuss the three dimensionality of flow in the vicinity of the pumping wells within each of the two aquifers, whether the pumping wells are fully penetrating, and the depths of piezometers used to measure head. Also present any calculations performed, as discussed beginning on page 19 (Step 4) of the referenced 2008 EPA guidance document.

3. Section 5.2 contains the sentence, "Groundwater analytical results were compared to their aqueous solubility." Please describe the comparison performed.
4. In Section 5.2.2.3 and in other portions of Section 5, reference is made to sampling locations such as MW030S3, MW07S1, and the MW016 well cluster, noting that at these locations contamination was found with no corresponding source being identified. Please provide a discussion of any and all potential source areas and how well those source areas are delineated with sampling data.
5. In Section 5.2.5.1 reference is made to 2008 Appendix IX sampling that was performed, and it mentions that dioxins "were generally never observed at this facility as groundwater contaminants." Please provide more discussion on the likelihood of dioxins or other potential contaminants being present as contaminants.

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In revising the report to respond to this comment it is important for Occidental to provide clear documentation on why and how the constituents for which sampling was conducted were selected. Realizing that historical data were used in the selection process as was knowledge of historical production and waste handling; Occidental should describe why certain constituents such as mercury, dioxin, furans, trichlorobenzenes, tetrachlorobenzenes, and 1,4-dioxin were not sampled for.

6. Section 5.3 refers to “residual saturation levels.” Please clarify the meaning of this phrase in the context of this section.
7. Section 6.1.1, in the 6th bullet, refers to the “standard Site COC list of parameters.” The report contains multiple tables of COC lists; however, as there is no table with that title, please indicate the whereabouts of that list.
8. Figures 23-36, 38-43, 45-53, 55-63, and 65-68 illustrate distributions of particular contaminants; but in order to support the isoconcentration contours depicted, they also need to show sample locations and detections. Additionally, please identify the RSL for the specific contaminant being mapped.
9. With regards to figures such as Figure 61, Occidental should describe in the text of the report possible reasons such as nutrients or co-contaminants that might cause contaminant breakdown/alteration in certain portions of the plume that could result in irregular plume shapes like those presented. The report points out that groundwater flow directions have changed over the years, which has caused extensions of plumes in multiple directions; likewise, if Occidental suspects such plume shapes are attributable to multiple sources please discuss this as well.
10. This report identifies plumes of different contaminants and summarizes distribution of contaminants in soil and groundwater, which is necessary to determine future monitoring protocols. Comparison of the report figures shows that plumes of these contaminants are covering some of the same areas, but only in a limited sense does it describe the results in terms of summarizing the contaminants from suspected source areas or SWMUs. As mentioned in comment number 4 above, some contamination is apparent without identifying what source/source area it came from. To strengthen the conceptual site model, please provide a discussion from this perspective, perhaps in Section 5.3 or Section 6.0.

Please provide a response to these comments in the form of a revised report or portions thereof within 30 days receipt of this letter. If you have questions about this letter you may reach me by phone at (913) 551-7279 or email me at Roberts.Bradley@epa.gov.

Sincerely,

Brad Roberts
Environmental Scientist
Waste Remediation and Permitting Branch
Air & Waste Management Division

cc: Lisa Blair, Occidental Chemicals
Everett Spellman, KDHE-BWM
Bruce Clegg, CRAWorld